ABSTRACT

A network computer maintains a directory of objects having multi-valued attributes. The attributes are comprised of individual linked values having conflict-resolution data that indicates a change to an object at an attribute-value level. A second network computer stores a replica of the directory in which a replica of the objects is maintained. The computers replicate the objects in the directories and update the individual linked values of the attributes. Replication conflicts are identified and resolved with the conflict-resolution data at the attribute-value level of the objects.